FRAMING CHINA-MALAYSIA TRADE RELATIONS BEYOND ASEAN: FACTORING THE REGIONAL COMPREHENSIVE ECONOMIC PARTNERSHIP

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ABSTRACT

The paper frames the trade relationship between China and Malaysia within the context of ASEAN and the impending RCEP. Specifically trade potentials are derived for the bilateral partnership within the two structures to identify whether China's external options under the RCEP affect her relationship with Malaysia. Potentials for trade expansion between China and Malaysia, estimated through a three-dimensional panel gravity model, are found to be marginally lower under the RCEP structure relative to ASEAN. More importantly, trade potentials appear exhausted for major products traded under both contexts. This suggests a change (decline) in the trade posture of the China-Malaysia partnership as relative advantages are most likely to be altered under the expanded matrix of Chinese relations with RCEP members. In coping with the larger matrix structure, both nations should innovate new forms of bilateral cooperation, beyond trade, to enhance their strategic partnership.

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INTRODUCTION

The Regional Comprehensive Economic Partnership (RCEP) includes all ten members of the Association of Southeast Asian Nations (ASEAN) and the six free trade agreement (FTA) partners – China, Japan, South Korea, India, Australia and New Zealand. The RCEP, an ASEAN-centred proposal, was launched in 2012, with the likelihood of completion by end of 2015. The 16 RCEP participating countries account for almost half of the world's population, approximately 30 per cent of global gross domestic product (GDP) and over a quarter of world exports.

Since the inception of the RCEP, there has been a proliferation of studies examining the feasibility of this region-wide FTA in consolidating the various ASEAN+1[1] agreements (Urata, 2013; Fukunaga and Isono, 2013). The RCEP is expected to deepen current engagement that has already been achieved between ASEAN and her FTA partners, thereby reinforcing ASEAN centrality in the wider Asia-Pacific regional infrastructure (Leal-Arcas, 2013; Das, 2014). Fukunaga and Isono (2013) however point out that the competing initiatives under the trilateral FTA that launched its negotiation in March 2013, the China-Japan-Korea (CJK) FTA[2], is likely to have negative impacts on all ASEAN

economies due to trade and investment diversion. Since the RCEP also includes the three large tripartite economies, the RCEP framework may result in different dynamics in the engagement between China and the ASEAN economies (see also Panda, 2014). Under the RCEP expanded regional matrix of relations, China could change its posture towards Southeast Asia as new economic opportunities emerge. This issue is taken up in this paper by focusing specifically on China-Malaysia relations to identify how likely bilateral engagement through trade cooperation will play out with the RCEP relative to ASEAN[3]. To achieve this objective, the paper compares bilateral trade potentials for the China-Malaysia partnership within the narrow context of ASEAN[4], from that of the expanded RCEP framework using a three-dimensional augmented panel gravity model. (Appendix Table 1 briefly profiles trade links between China and Malaysia).

The rest of this paper is organized as follows. Section 2 details the method and data employed to estimate trade potentials in China-Malaysia partnership. Based on the estimated trade potentials in Section 2, the paper will then go on to discuss the implications for the asymmetric China-Malaysia relationship beyond ASEAN to RCEP in Section 3. Section 4 concludes.

ESTIMATING TRADE POTENTIALS IN CHINA-MALAYSIA PARTNERSHIP: THE ASEAN VERSUS THE RCEP CONTEXTS

Interpretative Model

This paper employs the extended gravity model, developed by Chengang *et al.* (2010) based on Baltagi *et al.* (2003) and Egger (2002), to derive trade potentials in China-Malaysia partnership in the context of ASEAN and the RCEP. Using a panel data framework, the gravity equation is specified as follows:

$$\ln TRADE_{ijt} = \beta_1 \ln GDPT_{ijt} + \beta_2 SIMGDP_{ijt} + \beta_3 \ln GD_{ij} + \beta_4 \ln FDST_{ijt} + \beta_5 SIMFDS_{ijt} + \beta_6 RLFAC_{ijt} + \beta_7 DUMContig_{ij} + \beta_8 DUMLand_{ij} + \beta_9 DUMComlang_{ij} + \zeta_t + \varepsilon_{ijt}$$

where $TRADE_{ijt}$ is country i's (reporter) total trade with country j (partner) in year t. The trade model identification above is particularly important when a gravity model is applied to a single-country, instead to pairs of countries (Chan-Hyun, 2005). Since this study examines one-way bilateral trade flows in the context of China-ASEAN and China-RCEP, country i or the reporter country refers specifically to China. The other variables are as defined below.

GDPT = total GDP of countries *i* and *j*
SIMGDP = similarity in the levels of GDP in *i* and *j*
GD = geographical distance between *i* and *j*
FDST = total inward FDI stock of *i* and *j*
SIMFDS = similarity in inward FDI stocks in *i* and *j*
RLFAC = relative factor endowments in *i* and *j*
DUMContig = dummy variable set equal to 1 if *i* and *j* are contiguous, and 0 otherwise
DUMLand = dummy variable set equal to 1 if either *i* or *j* is a landlocked country, and 0 otherwise

DUMComlang = dummy variable set equal to 1 if *i* and *j* share a common official language, and 0 otherwise

In equation (1), β represents the coefficient estimates, ζ_t is time effects and ε_{ijt} is a white-noise disturbance term.

The above equation follows from a standard gravity model comprising gross domestic product (*GDP)* and geographical distance (*GD*) between countries, augmented with the stocks of inward foreign direct investment (*FDS*) and relative factor endowments (*RLFAC*) on the basis that the latter two variables are closely related to a country's trade capabilities and transaction costs respectively. The following explains the theories that underlie the selection of the explanatory variables in equations (1) and (2), beginning with the core variables of the gravity model.

The level of GDP of both reporter and partner countries are supposed to positively affect their trade. Instead of using the levels of GDP of both countries independently, the total GDP of both partners, *GDPT*, is included in the estimations to jointly capture economies of scale or the size effect. The higher the *GDPT*, the larger the trade flows, given that a greater division of labour and specialization becomes feasible under a larger scale of operation.

However, the level of GDP alone may not be sufficient to explain trade as the similarities of the two trading partners GDPs are of no less importance. From a theoretical perspective, similarity in the level of GDP (*SIMGDP*) or convergence in income levels (or tastes) is likely to increase trade either through the expansions in trade in manufactures or the increase in scope for product diversity.

The next core argument of the gravity model is the *GD* variable. *GD* remains important for considerations of transport costs (Egger, 2000), transaction costs (Bergstrand, 1985; Edmonds *et al.,* 2008) and timeliness in delivery (Rojid, 2006), and is included in the estimations. Thus, the expectations are for $\beta_3 < 0$ (Tinbergen, 1962; Poyhonen, 1963).

Theoretically, foreign direct investment (FDI) contributes to intra-firm trade through global production networks and the increase in product variety in the host economy. This in turn increases the volume of trade, mainly through intra-industry trade (IIT). However, if FDI and trade are substitutes, for example if FDI is mainly channelled into domestic production of the host economy, then, it does not necessarily contribute to expansions in exports. As such, the relationship between *FDS* and international trade remains inconclusive.

The distribution of *FDS* amongst trade partners is also considered important for international trade. If the size of *FDS* is similar between trade partners, one may expect similar volumes and varieties of bilateral exports from the partner countries. Following which, the import capabilities of both partner countries are also likely to be similar, leading to expansions in bilateral trade. Conversely, if the size of *FDS* is uneven between trade partners, the country with a smaller stock, offers less export capabilities and likewise smaller import capabilities, resulting in lower expansions in bilateral trade. Based on this reasoning, a positive relationship is envisaged between *SIMFDS* and trade.

Differences in factor endowments or factor intensity (capital-labour ratio or K/L) do matter for international trade (Debaere, 2003; Frankel *et al.,* 1995; Ghosh and Yamarik, 2004; Baxter and Kouparitsas, 2006; Cieslik, 2009). Traditional neoclassical trade theories suggest that comparative advantages based on differences in factor endowments explain basically IT. Alternatively, newer trade theories based on economies of scale and product differentiation attribute similarities in factor endowments to trade expansions through IIT.

Thus, the differences and similarities of factor endowments (apart from *SIMGDP*) are closely linked to the structure of trade. If the structure of trade is IT-based, differences in factor endowments[5] will most likely facilitate trade expansion vis-à-vis similarities in factor endowments. In this respect, the expected sign for β_6 will be positive (negative) if IT (IIT) dominates.

Finally, border or contiguity effects (*DUMContig*), landlocked effects (*DUMLand*), and common language (*DUMComlang*) are included in the baseline estimations. Common language is considered a measure of cultural distance. When two countries speak the same language, it makes communication easy and reduces transaction costs between them.

Empirical Strategy

The paper employs both the random effects (RE) and the Hausman and Taylor (henceforth HT, 1981) technique to estimate equation (1). The RE estimator is chosen for the following reasons, despite the fact that the Fixed Effects (FE) estimator is much more common in gravity models than the RE estimator. The RE estimator has the advantage of not requiring the exclusion of variables that are time invariant. In this case, both the distance (*GD*), border or contiguity effects (*DUMContig*), landlocked effects (*DUMLand*) and common language (*DUMComlang*) are invariant across time periods, and these variables are of considerable interest to this study. Furthermore, all of the variables exhibit more variation in the data across country-pair-product group (between variation) than over time (within variation). This is not surprising given the large number of cross-section entities (based on country-pair-product groups) used for the estimations, which are believed to have some influence on bilateral trade. As such, a FE may not work well for data with minimal within variation or for variables that change slowly over time. Since FDI and new growth theories suggest that *GDPT* and *FDST* are likely to be endogenous, the HT technique is employed (see also Egger, 2002).

Based on the RE and HT estimations of the gravity model, China's trade potentials with Malaysia are derived. Trade potentials, the ratio of predicted trade (P, arrived at by the estimated value of the dependent variable) to actual/ observed trade (A), are compared within the sample of China-ASEAN and China-RCEP, respectively. If the value of P/A exceeds one (under-trading), then there is potential for expansion of trade with the respective country.

Data

The dataset includes China's trade with the 10 countries of the ASEAN (Malaysia, Singapore, Thailand, Philippines, Indonesia, Brunei, Cambodia, Laos, Myanmar and Vietnam) and 15 countries of the RCEP (ASEAN10, Japan, South Korea, India, Australia and New Zealand). The data span the period 1992-2012 (annual). The primary data on export and import flows based on the Harmonized System (HS) nomenclature is derived from the UN COMTRADE database. The data on *GDP*, labour force (L) and gross fixed capital formation (GFCF) are sourced from the World Bank Development Indicators and Global Development Finance (online World dataBANK). The data on *FDS* is obtained from

the online database of the United Nations Conference on Trade and Development (UNCTAD), which is UNCTADstat. Data for *GD* on the basis of the average distance between the capitals for country-pairs and the information for country-pair contiguity (*DUMContig*), country-pair common language (*DUMComlang*) and landlocked (*DUMLand*) countries are extracted from the CEPII database. The definition and measurement of the key variables used in regression analysis are summarized in Appendix Table 2.

Potentials for expansions in the Chinese trade with Malaysia are estimated separately within the ASEAN and RCEP samples. The empirical estimations constitute a three-dimensional balanced panel of 30,555 observations (17 country-pairs x 97 product groups x 21 years; the cross-section dimension relates to the country-pair-product group) for China-RCEP trade and 20,370 observations (10 country-groups x 97 product groups x 21 years) for China-ASEAN trade. The broad product groups[6] in the cross-sectional dimension refer to the 97 sectors at the Harmonized System (HS) 2-digit level, as listed in Appendix Table 3.

Results

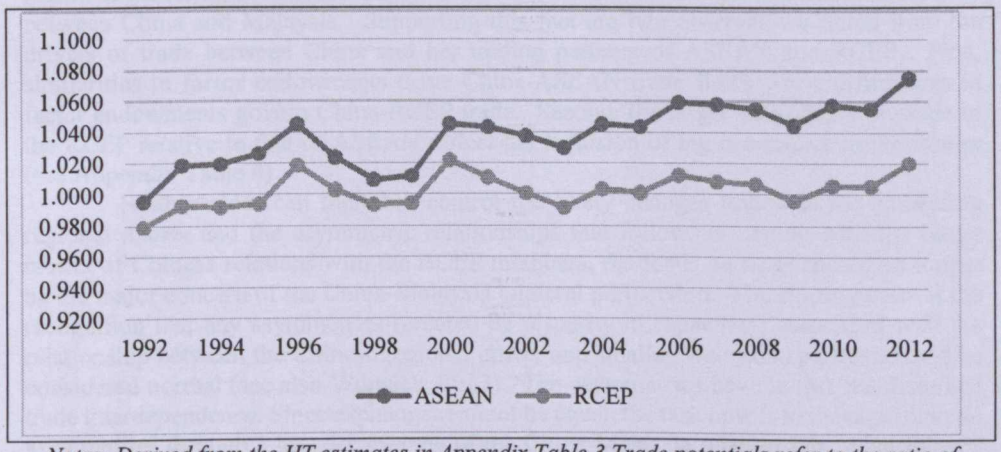
Appendix Table 4 presents the results of the RE and HT models on the determinants of trade flows in China-ASEAN and China-RCEP partnerships. Qualitatively, the HT results are found to be similar to the RE estimates. Based on the HT estimations of the gravity model, China's trade potentials with Malaysia are derived and presented in Figure 1. Trade potentials for the entire time span (1992-2012) are calculated on the basis of the average values of P and A across the 97 sectors.

Figure 1 caricatures the estimated trade potentials of China with Malaysia within the context of ASEAN and the RCEP. The results indicate that predicted trade is consistently higher than actual trade for China-Malaysia partnership in the ASEAN context. However, there is less potentials for China to increase her trade with Malaysia within the expanded RCEP framework. In both contexts, the spread between actual and predicted trade flows remains rather close.

To further forward our understanding on trade potentials of China in Malaysia within the context of ASEAN and the RCEP, trade potentials are derived for the major products traded in the bilateral China-Malaysia partnership. The product categories considered are HS85 and HS84 (see Appendix Table 3), which made up 43 per cent and 9 per cent of total trade between China and Malaysia in 2012. Both product groups have dominated bilateral trade between China and Malaysia over the period of review. The plots of the estimated trade potentials are presented in Figure 2.

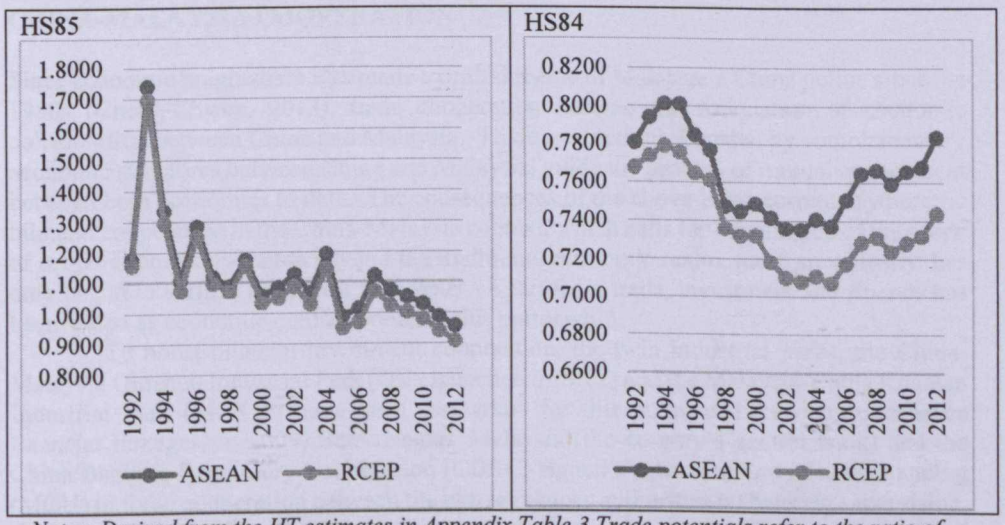
Interestingly, potentials of China to increase trade with Malaysia in the HS85 category appear to erode with time, while it remains exhausted for the HS84 category over the period of review. The declining trade potentials in major products traded between both parties suggest a need to broaden the base of China-Malaysia trade. Overtrading in products of the HS85 category in the recent past reflects the density of networks in electronics within Asia's regional trade, of which China is a central player. For 2012, China overtraded with Malaysia in 39 sectors and 58 sectors based on the derived trade potentials estimates from the China-ASEAN and China-RCEP members respectively.

FIGURE 1. CHINA: TRADE POTENTIALS WITH MALAYSIA, 1992-2012



Notes: Derived from the HT estimates in Appendix Table 3.Trade potentials refer to the ratio of predicted to actual values of trade flows.

FIGURE 2. CHINA: TRADE POTENTIALS WITH MAJOR SECTORS OF MALAYSIA, 1992-2012



Notes: Derived from the HT estimates in Appendix Table 3 Trade potentials refer to the ratio of predicted to actual values of trade flows. HS85 - Electrical machinery, equipment parts thereof; sound recorder etc.; and HS84 – Nuclear reactors, boilers, machinery and mechanical appliances; parts.

Taken together, the results on the lower trade potentials of China with Malaysia under the expanded RCEP framework relative to the ASEAN region and the exhausted trade potentials of China in Malaysia for a larger number of product categories within the RCEP,

imply changes in the Chinese trade posture towards Malaysia with the RCEP. The structural matrix of the RCEP members is likely to alter the relative advantages and trade interactions between China and Malaysia. Supporting this fact are two observations noted from the drivers of trade between China and her trading partners of ASEAN and RCEP. First, similarities in factor endowments drive China-ASEAN trade flows while differences in factor endowments govern China-RCEP trade. Second, the larger size effects on trade in the RCEP relative to that of ASEAN reflect the inclusion of big economies in the former (see Appendix Table 4).

Neither sides can therefore control the likely changes linked to the expanding regional matrix and the asymmetric relationships that follow. In coping with the larger matrix of Chinese relations with the RCEP members, the focus on trade should no longer be the major concern of the China-Malaysia bilateral partnership. The starting point is the recognition that any asymmetries (created by disparity in capacities) associated with the relationship between the Chinese regional power and smaller Malaysian partner should be considered normal (see also Womack, 2012). The asymmetries have in fact not disturbed trade interdependence. Since exchanges cannot be equal, the task now is to manage bilateral asymmetries through a broader framing of the China-Malaysia relationship. What follows is a discussion on how asymmetry may be redefined and addressed in terms of bilateral cooperation in non-traditional areas.

MANAGING ASYMMETRIC[7] RELATIONSHIP: BROADER FRAMING OF CHINA-MALAYSIA COOPERATION

Since economic pragmatism was made a central theme of Malaysia's China policy since the 1980s (Cheng-Chwee, 2013), trade cooperation became the foundation of economic collaboration between China and Malaysia. Trade interactions, boosted by complementary economic structures between China and Malaysia, guide the process of mutual engagement between both economies to date. The consequences of the above is the current asymmetric bilateral cooperation in the China-Malaysia context, which calls for a scaling up of the scope of cooperation. Cooperation beyond the traditional economic realm, more specifically, has only begun to surface in the last four years. Apart from trade, investment and finance has been added as economic contact points in this partnership.

To boost bilateral investment cooperation, the twin industrial parks, the China-Malaysia Qinzhou Industrial Park (QIP, launched in 2012) and the Malaysia-China Kuantan Industrial Park (MCKIP) have been earmarked for this purpose. Likewise, to enhance financial linkages, in 2009, Bank Negara Malaysia (the country's central bank) and the China Banking Regulatory Commission (CBRC) signed a memorandum of understanding (MOU) to forge cooperation between the two regulatory authorities on banking supervision.

Apart from investment and finance, higher education and tourism have been added into the list of commercial ties to generate robust links between both parties. In education, this involved the signing of a mutual recognition agreement on higher education (signed in 2011) to boost education exchanges between the two nations; submissions of accreditation of higher learning institutions by both parties; and setting up of a Xiamen University branch campus in Malaysia. As for tourism, the Malaysian Association of Tour and Travel Agents (MATTA) signed a memorandum of cooperation with the China Muslim Travel Association (CMTA) in 2011.

The so-called non-traditional nodes of cooperation are contingent on history, leadership and culture (Womack, 2010). The common understanding and growing convergence of interests of both parties on 'Asian values' and 'multipolarity' has become a foundation for the partnership. Following which, visits of state to reaffirm and solidify the relationships has become embryonic and has transcended leadership changes in both capitals. A testimony to this from the Malaysian perspective is that both the successors of Mahathir Mohamad as Prime Minister, Abdullah Badawi and Najib Razak, chose China as the first country outside ASEAN to visit upon taking office, in 2003 and 2009 respectively.

CONCLUDING REMARKS

Within the context of ASEAN and the impending RCEP, the paper examines the trade potentials between China and Malaysia. The derived trade potentials for the China-Malaysia bilateral partnership are compared across the two regional structures to provide some indications whether China's external options can influence her relationship with Malaysia. The findings of the study are summarized as follows. First, lower potentials for China's trade expansion with Malaysia are noted in the RCEP context relative to the ASEAN. Second, China seems to be overtrading with Malaysia in a majority of sectors within the RCEP relative to the ASEAN. Comparisons of the potentials for trade expansion within both structures suggest a change (decline) in the trade posture of the China-Malaysia partnership. A possible reason for this is that relative advantages are most likely to be altered under the expanded matrix of Chinese relations with RCEP vis-à-vis the ASEAN.

The study also provides indications on the direction of commercial ties between both nations. Both countries, China and Malaysia, should innovate new forms of bilateral cooperation, beyond trade to enhance their strategic partnership. As the potentials to trade between China and Malaysia reduce (or even become exhausted) under the expanded relations of RCEP, the need to inject a fresh momentum in areas such as education, tourism, science and technology, becomes even more pressing to sustain and balance bilateral cooperation between China and Malaysia. From the Malaysian side, it is even more critical to cultivate ties with China in these diverse areas, as China has many suitors. Further, the asymmetrical investment links between both parties bring to the fore the current gaps in bilateral cooperation. Malaysia's outward investment to China is six times that of the Chinese investments in Malaysia.

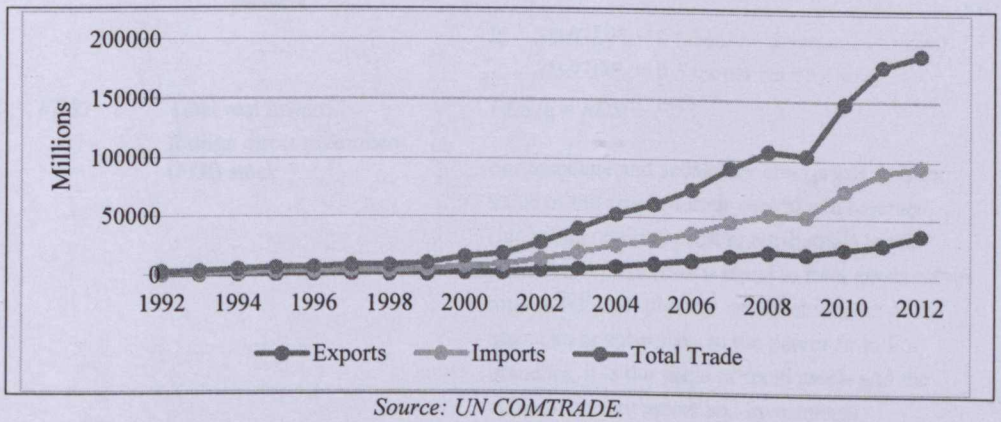
Broader economic cooperation motivated by commercial payoffs should therefore be the focus of the China-Malaysia partnership. The Five-Year Programme for Economic and Trade Cooperation that was recently signed by China and Malaysia in 2013, provides for the expanded (higher level) bilateral economic cooperation recommended in the paper, as it covers the entire spectrum of activities beyond trade in merchandise goods.

In the case of the China-Malaysia partnership, proximity and socio-cultural links will help facilitate bilateral cooperation in the various areas the mentioned above, and sub-national cooperation at the people-to-people level. In fact, the RCEP is also likely to pay more attention to physical, institutional and people-to-people connectivity (Das, 2014). With Malaysia taking the reins of ASEAN in 2015 and China's support for the RCEP, the links between China and Malaysia are expected to be strengthened.

APPENDIX TABLE 1. DATA NOTE ON CHINA-MALAYSIA TRADE LINKS

Being the first country in Southeast Asia to establish diplomatic relations with China that dates back 40 years, it is not surprising to note that the Sino-Malaysia trade is tenacious and persistent in character. The long relationship between both parties has culminated into China emerging as Malaysia's number one trading partner and likewise, Malaysia as China's largest trading partner in Southeast Asia. China's trade with Malaysia increased from US$1476 million US$94831 million between 1992 and 2012, recording an average annual growth rate of 24 per cent. China and Malaysia are set to achieve a total bilateral trade of US$160 billion by 2017. China, however, recorded consistent deficits for the period of review. The importance of China as a big import market is also well demonstrated in the trade patterns of Asia.

CHINA: BILATERAL TRADE WITH MALAYSIA, 1992-2012
(IN US$ MILLION)



Source: UN COMTRADE.

Based on market shares of China's trade with the ASEAN and RCEP members, Malaysia has grown in importance as a trading partner to the former over the decades. Malaysia constitutes 24 per cent and 8 per cent of total trade of China with ASEAN and RCEP in 2012, respectively. Malaysia is more important as an import source relative to an export destination for China within the ASEAN region and the expanded RCEP.

MARKET SHARES OF MALAYSIA IN CHINA'S TRADE (IN %)

	with ASEAN			with RCEP		
Year	Exports	Imports	Total Trade	Exports	Imports	Total Trade
1992	13.83	18.81	16.25	3.28	3.63	3.47
2000	14.79	24.71	20.36	3.39	5.84	4.74
2012	17.88	29.77	23.70	6.85	8.95	8.01

Source: UN COMTRADE.

APPENDIX TABLE 2. DEFINITION AND MEASUREMENT OF VARIABLES

Variable	Definition	Measurement
TRADE	Real exports	Total exports plus imports, expressed in current USD, deflated by the CPI index, with 2005 as the base year.
GDPT	Total real GDP	$GDPT_{ij} = GDP_i + GDP_j$ where *GDP*, expressed in current USD, is deflated by the *GDP* deflator with 2005 as the base year
SIMGDP	Similarity in the levels of GDP or relative size of trade partners	$SIMGDP_{ij} = 1 - \frac{GDP_i^2}{(GDP_i + GDP_j)^2} - \frac{GDP_j^2}{(GDP_i + GDP_j)^2}$ where $0 \leq SIMGDP_{ij} \leq 0.5$ If $SIMGDP_{ij} = 0$ (absolute divergence in size) $SIMGDP_{ij} = 0.5$ (equal country size)
FDST	Total real inward foreign direct investment (FDI) stock	$FDST_{ij} = FDS_i + FDS_j$ For associate and subsidiary enterprises, it is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise (this is equal to total assets minus total liabilities), plus the net indebtedness of the associate or subsidiary to the parent firm. For branches, it is the value of fixed assets and the value of current assets and investments, excluding the amounts due from the parent, less the liabilities to third parties. The *FDS*, expressed in current USD, is deflated by the CPI index with 2005 as the base year.
SIMFDS	Similarity in the inward FDI stock of trade partners	$\boldsymbol{SIMFDS_{ij} = 1 - \frac{FDS_i^2}{(FDS_i + FDS_j)^2} - \frac{FDS_j^2}{(FDS_i + FDS_j)^2}}$

Variable	Definition	Measurement
RLFAC	Similarity in capital-labour ratios or the distance between countries in terms of relative factor endowments	$RLFACij = \lvert \ln(K_{jt}/L_{jt}) - \ln(K_{it}/L_{it}) \rvert$ where K = capital stock; and L = labour force If $RLFAC_{ij} = 0$ (same proportion of factor endowments) The estimated capital stock is $K_t = GFCF_t + (1 - \delta)K_{t-1}$ Total labour force comprises people ages 15 and older who meet the International Labour Organization definition of the economically active population. The GFCF consists of outlays on additions to the fixed assets (land improvements, plant, machinery and equipment purchases; construction of roads, railways and the like) of the economy plus the net changes in the level of inventories. The GFCF, expressed in current USD, is deflated by the CPI index with 2000 as the base year. Using the data on GFCF, K is estimated using the standard perpetual inventory calculation method (Miller & Upadhyay, 2000): $K_0 = GFCF_0 / [\lambda gd + (1 - \lambda)gw + \delta]$ where the initial or base year is 1970. gd = average growth rate of the GDP series for the related country for the period of review gw = estimated average world growth rate for the period of review $\lambda = 0.25$, measure of mean reversion in growth rates $\delta = 0.05$, assumed rate of depreciation
GD	Geographical distance	The average distance (in kilometres) between the capitals of i and j.

APPENDIX TABLE 3. PRODUCT DESCRIPTION

HS Code	Description
01	Live animals
02	Meat and edible meat offal
03	Fish & crustacean, mollusc & other aquatic invertebrate
04	Dairy products; bird's eggs; natural honey ; edible product nes
05	Products of animal origin, nes or included
06	Live tree & other plants; bulb, root; cut flowers etc.
07	Edible vegetables, certain roots & tubers
08	Edible fruit & nuts; peel of citrus fruit or melons
09	Coffee, tea, mate & spices
10	Cereals
11	Product milling industry; malt; starches; inulin; wheat gluten
12	Oil seed, oleage fruits; miscellaneous grain, seed, fruit etc.
13	Lac; gums, resin, other vegetable saps & extracts
14	Vegetable plaiting materials; vegetable products nes
15	Animal/vegetable fats & oils & their cleavage products etc.
16	Preparation of meat, fish or crustaceans, molluscs etc.
17	Sugars & sugar confectionary
18	Cocoa & cocoa preparation
19	Preparation of cereal, flour, starch/milk; pastry cooks' products
20	Preparation of vegetable, fruit, nuts or other parts of plants
21	Miscellaneous edible preparations
22	Beverages, spirits & vinegar
23	Residues & waste from the food industry; preparation animal fodder
24	Tobacco & manufactured tobacco substitutes
25	Salt; sulphur; earth & stone; plastering mat; lime & cement
26	Ores, slag & ash
27	Mineral fuels, oils & product of their distillation etc.
28	Inorganic chemicals; compounds of precious metals; radioactive elements etc.
29	Organic chemicals
30	Pharmaceutical products
31	Fertilisers
32	Tanning/dyeing extract; tannins & derives; pigments etc.
33	Essential oils & resinoids; perfumes; cosmetic/toilet preparation

HS Code	Description
34	Soap, organic surface-active agents, washing preparation etc.
35	Albuminoidal substance; modified starches; glues; enzymes
36	Explosives; pyrotechnic products; matches; pyrophoric alloy etc.
37	Photographic or cinematographic goods
38	Miscellaneous chemical products
39	Plastics & articles thereof
40	Rubber & articles thereof
41	Raw hides and skins (other than fur skins) & leather
42	Articles of leather; saddlery/harness; travel goods etc.
43	Fur skins & artificial fur; manufactures thereof
44	Wood & articles of wood; wood charcoal
45	Cork & articles of cork
46	Manufactures of straw, esparto/other plaiting material etc.
47	Pulp of wood/of other fibrous cellulosic material; waste etc.
48	Paper & paperboard; art of paper, pulp, paper/paperboard
49	Printed books, newspapers, pictures & other products etc.
50	Silk
51	Wool, fine/coarse animal hair, horsehair yarn & fabric
52	Cotton
53	Other vegetable textile fibres; paper yarn & woven fabric
54	Man-made filaments
55	Man-made staple fibres
56	Wadding, felt & nonwoven; yarns; twine, cordage etc.
57	Carpets and other textile floor coverings
58	Special woven fabric; tufted textile fabric; lace; tapestries etc.
59	Impregnated, coated, cover/laminated textile fabric etc.
60	Knitted or crocheted fabric
61	Articles of apparel & clothing access, knitted or crocheted
62	Articles of apparel & clothing access, not knitted/crocheted
63	Other made up textile articles; sets; worn clothing etc.
64	Footwear, gaiters & the like; parts of such articles
65	Headgear & parts thereof
66	Umbrellas, walking sticks, seat sticks, whips etc.

HS Code	Description
67	Prepared feathers & down; artificial flowers; articles of human hair
68	Art of stone, plaster, cement, asbestos, mica/sim mat
69	Ceramic products
70	Glass & glassware
71	Natural/cultured pearls, precious stones & metals, coin etc.
72	Iron & steel
73	Articles of iron or steel
74	Copper & articles thereof
75	Nickel & articles thereof
76	Aluminium & articles thereof
77	Lead & articles thereof
79	Zinc & articles thereof
80	Tin & articles thereof
81	Other base metals; cements & articles thereof
82	Tools, implements, cutlery, spoon & fork, of base metal etc.
83	Miscellaneous articles of base metal
84	Nuclear reactors, boilers, machinery & mechanical appliance; parts
85	Electrical machinery, equipment parts thereof; sound recorder etc.
86	Railway/tramway locomotives, rolling stock & parts thereof etc.
87	Vehicles other than railway/tramway rolling stock, parts & accessories
88	Aircraft, spacecraft & parts thereof
89	Ships, boats & floating structures
90	Optical, photo, cine, checking, precision etc.
91	Clocks, watches & parts thereof
92	Musical instruments; parts & accessories of such articles
93	Arms & ammunition; parts & accessories thereof
94	Furniture, bedding, mattress, material support, cushion etc.
95	Toys, games & sports requisites; parts & accessories thereof
96	Miscellaneous manufactured articles
97	Works of art, collectors' pieces & antiques
99	Commodities, nes

APPENDIX TABLE 4. DETERMINANTS OF TRADE FLOWS

Variables	China-ASEAN		China-RCEP	
	RE	HT	RE	HT
ln*GDPT*	0.198	0.171**	0.980***	0.862***
	(0.135)	(0.088)	(0.129)	(0.063)
SIMGDP	0.062***	0.062***	0.031***	0.028***
	(0.009)	(0.004)	(0.004)	(0.002)
ln*GD*	-2.826***	-2.693***	-0.938****	-0.967***
	(0.722)	(0.799)	(0.129)	(0.182)
ln*FDST*	-3.057***	-2.802***	-0.081	0.166
	(0.622)	(0.723)	(0.254)	(0.266)
SIMFDS	0.054***	0.045***	0.035***	0.028***
	(0.008)	(0.008)	(0.004)	(0.003)
RLFAC	-0.184*	-0.106*	0.136*	0.194***
	(0.100)	(0.056)	(0.075)	(0.041)
DUMContig	-0.274	-0.236	-0.594**	-0.514**
	(0.362)	(0.419)	(0.236)	(0.263)
DUMComlang	3.490***	3.535***	1.580***	1.586***
	(0.346)	(0.395)	(0.227)	(0.303)
DUMLandlocked	-3.737***	-3.876***	-4.164***	-4.434***
	(0.550)	(0.504)	(0.530)	(0.452)
Constant	115.656***	108.478***	-3.585	-6.514
	(17.978)	(20.644)	(7.867)	(7.455)
Year effects	Yes	Yes	Yes	Yes
No. of observations	20370	20370	30555	30555
No. of groups	970	970	1455	1455
R^2 overall	0.317		0.319	
Wald test	1993.36	7078.25	2802.98	11562.76
Breusch-Pagan LM test	85015.88		140000	

*Notes: The dependent variable is lnTRADE. RE – random effects; HT –Hausman-Taylor. Standard errors are in parentheses. ***, **, and * show 1%, 5%, and 10% significance, respectively.*

ENDNOTES

[1] ASEAN has signed the trade in goods agreement with all six FTA partners, ASEAN-China FTA (ACFTA), ASEAN-Japan Comprehensive Economic Partnership (AJCEP), ASEAN-Republic of Korea FTA (AKFTA), ASEAN-India FTA (AIFTA) and ASEAN-Australia- New Zealand FTA (AANZFTA).

[2] The CJK accounts for 72.2 per cent of GDP within the RCEP and contributes 21 per cent of total intra-regional trade.

[3] It is justified to compare China-Malaysia relations within ASEAN and RCEP since the RCEP is generally seen as an 'ASEAN++' formula. Further, China views RCEP as an extension of China-ASEAN engagement (Panda, 2014).

[4] ASEAN and China enacted a FTA (ASEAN-China FTA or ACFTA) in goods trade in July 2005 and completed the liberalization process in January 2010.

5. It should be borne in mind that differences in factor endowments are also crucial in determining vertical IIT, but, to a lesser degree (Chan-Hyun, 2005).

6. This level of aggregation balances the issue of disaggregated versus aggregated analysis and also reduces the problem of a standard sample selection bias.

[7] Asymmetries refer to the bilateral lopsided cooperation in terms of the focus of engagement in the past; managing asymmetries include multi-lateralizing (or broadening) cooperation to non-traditional areas.

REFERENCES

Baltagi, Badi, H., Egger, P. and Pfaffermayr, M., "A Generalized Design for Bilateral Trade Flow Models", *Economics Letters,* 2003, Vol. 80, No. 3, pp. 391-397.

Baxter, Marianne and Kouparitsas, M.A., "What Determines Bilateral Trade Flows?" NBER Working Paper No.12188 (Cambridge Massachusetts: National Bureau of Economic Research, 2006), accessed December 12, 2011, http://cid.bcrp.gob.pe/biblio/papers/nber/2006/abril/w12188.pdf;

Bergstrand, Jeffrey, H., "The Gravity Equation in International Trade: Some Microeconomic Foundations and Empirical Evidence", *Review of Economics and Statistics,* 1985, Vol. 67, No. 3, pp. 474-481;

Chan-Hyun Sohn, "Does the Gravity Model Explain South Korea's Trade Flows?" *Japanese Economic Review*, 2005, Vol. 56, No. 4, pp. 417-430.

Chengang Wang, Wei, Y. and Liu, X., "Determinants of Bilateral Trade Flows in OECD Countries: Evidence from Gravity Panel Data Models", *World Economy,* 2010, Vol. 33, No. 7, pp. 894-915.

Cheng-Chwee, Kuik, "Making Sense of Malaysia's China Policy: Asymmetry, Proximity, and Elite's Domestic Authority", *Chinese Journal of International Politics,* 2013, Vol. 6, No. 4, pp. 429-467.

Cieslik, Andrzej, "Bilateral Trade Volumes, the Gravity Equation and Factor Proportions", *Journal of International Trade and Economic Development*, 2009, Vol. 18, No. 1, pp. 37-59.

Das, Sanchita Basu, *The Political Economy of the Regional Comprehensive Economic Partnership (RCEP) and the Trans-Pacific Partnership (TPP) Agreements: An ASEAN Perspective* (Singapore: Institute of Southeast Asian Studies (ISEAS), 2014).

Debaere, Peter, "Relative Factor Abundance and Trade", *Journal of Political Economy*, 2003, Vol. 11, No. 3, pp. 589-610.

Edmonds, Cristopher, Croix, S.L. and Yao L., "China Trade: Busting Gravity's Bounds", *Journal of Asian Economies,* 2008, Vol. 19, Nos. 5-6, pp. 455-466.

Egger, Peter, H., "A Note on the Proper Econometric Specification of the Gravity Equation", *Economics Letters,* 2000, Vol. 66, No. 1, pp. 25-31.

Egger, Peter, H., "An Econometric View on the Estimation of Gravity Models and the Calculation of Trade Potentials", *World Economy*, 2002, Vol. 25, No. 2, pp. 297-312.

Frankel, Jeffrey, Stein, E. and Shang-Jin W., "Trading Blocs and the Americas: The Natural, the Unnatural and the Supernatural", *Journal of Development Economics,* 1995, Vol. 47, No. 1, pp. 61-95.

Fukunaga, Yoshifumi and Isono, I., "Taking ASEAN+1 FTAs towards the RCEP: A Mapping Study", ERIA Discussion Paper 2013-02 (Tokyo: Economic Research Institute for ASEAN and East Asia, ERIA, 2013), accessed February 14, 2014, http://www.eria.org/ERIA-DP-2013-02.pdf

Ghosh, Sucharita and Yamarik, S., "Are Regional Trading Arrangements Trade Creating? An Application of Extreme Bounds Analysis", *Journal of International Economics,* 2004, Vol. 63, No. 2, pp. 369-395.

Hausman, Jerry A. and Taylor, W.E., "Panel Data and Unobservable Individual Effects", *Econometrica,* 1981, Vol. 49, No. 6, pp.1377-1398.

Leal-Arcas, Rafeal, "China and thee Regional Comprehensive Economic Partnership", *Journal of Global Policy and Governance*, 2013, Vol. 2, No. 2, pp. 287-304.

Miller, Stephen M. and Upadhay, M.P., "The Effects of Openness, Trade Orientation and Human Capital on Total Factor Productivity", *Journal of Development Economics,* 2000, Vol. 63, No. 2, pp. 399–423.

Panda, Jagannath P., "Factoring the RCEP and the TPP: China, India and the Politics of Regional Integration", *Strategic Analysis,* 2014, Vol. 38, No. 1, pp.49-67.

Poyhonen, Pertti, "A Tentative Model for the Volume of Trade between Countries", *Weltwirtschafliches Archiv,* 1963, Vol. 90, No. 1, pp. 93-99.

Rojid, Sawkut, "COMESA Trade Potential: A Gravity Approach", *Applied Economics Letters,* 2006, Vol. 13, No. 14, pp. 947-951.

Tinbergen, Jan, *Shaping the World Economy: Suggestions for an International Economic Policy* (New York: Twentieth Century Fund, 1962).

Urata, Shujiro, Constructing and multilateralizing the Regional Comprehensive Economic Partnership: an Asian Perspective, ADBI Working Paper Series No. 449 (Tokyo: Asian Development Bank Institute, ADBI, 2013), accessed February 14, 2014, http://www.adbi.org/files/2013.12.02.wp449.regional.economic.partnership.asia.pdf

Womack, Brantly, *China Among Unequals: Asymmetric Foreign Relationships in Asia* (Singapore: World Scientific, 2010).